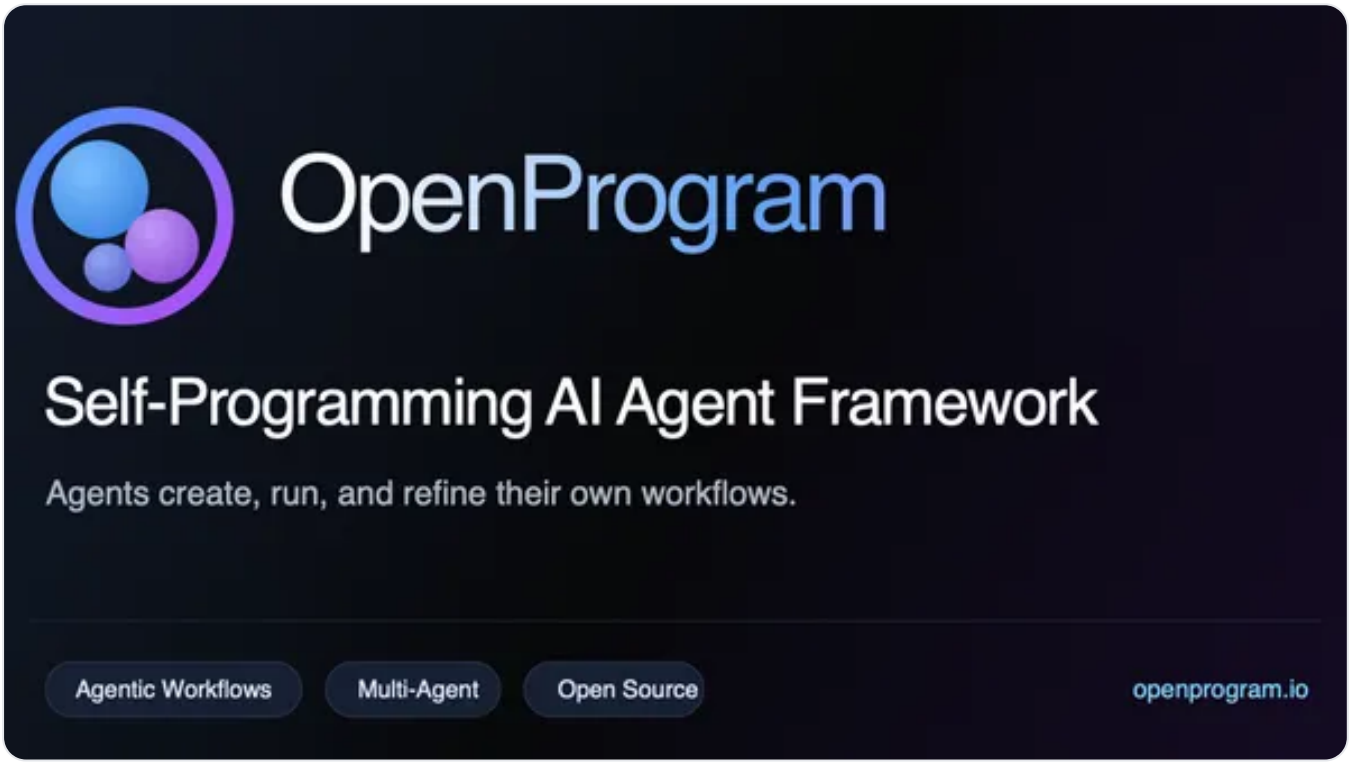
OpenProgram

An open-source runtime for self-programming AI agents that can build, run, and refine their own workflows.



About

OpenProgram is a self-programming AI agent framework for building agents that create, run, and refine their own workflows. It combines an open-source runtime with model providers, tools, memory, context, multi-agent collaboration, and multiple interfaces so you can inspect and operate the same agent system from the web, terminal, or CLI.

What is OpenProgram

OpenProgram is a self-programming AI agent framework that lets agents create and refine their own workflows while the runtime handles the surrounding execution layer. It

is built as an open-source system under the AGPL-3.0 license and is designed for Python 3.11+.

The project positions itself as both a framework and a runtime. That means you can either install ready-made agent harnesses or build custom agent logic in ordinary Python. The runtime keeps model calls, tool usage, memory, context, and collaboration features inside a single execution flow so the work remains inspectable.

OpenProgram supports three main surfaces for working with agents:

- Web UI for browsing sessions and reviewing activity
- Terminal UI for interactive command-line use
- CLI for headless execution and automation

Key features

OpenProgram centers on an agent runtime that can manage both agentic decisions and deterministic Python code. The documentation and site describe several core capabilities:

- **Model providers:** connect to Anthropic, OpenAI, Gemini, and compatible backends with account and model configuration.
- **Tools and MCP:** give agents local tools, browser actions, external services, and MCP server capabilities.
- **Skills and memory:** load reusable instructions and preserve task knowledge across longer jobs.
- **Multi-agent collaboration:** spawn agents, exchange messages, and isolate file-changing work in separate branches.
- **Sessions and branches:** keep conversations, calls, context, forks, and execution history inspectable.
- **Installable harnesses:** install, manage, run, and publish Python harnesses through one package contract.
- **Web UI session review:** inspect sessions, branches, model calls, and context from one interface.

- GUI Agent for desktop application and GUI environment work with visual grounding, action execution, and task verification
- Research Agent for literature research, experimentation, analysis, and paper-writing workflows
- Wiki Agent for organizing notes, documents, and conversations into an Obsidian knowledge base

How to use it

OpenProgram is set up as a Python-based system, and the quick start points to macOS and Linux installation steps.

- Install the runtime using the provided shell command from the website.
- Start OpenProgram with the `openprogram` command.
- On first run, choose a model provider and connect the account or backend you want to use.
- Pick the interface that fits the task: Web UI, terminal UI, or CLI.
- Run an existing harness such as GUI Agent, Research Agent, or Wiki Agent, or build your own agent in Python.
- Use a decorated function as the task contract when writing custom workflows, and call the model only where judgment is needed.

A key idea in the framework is that Python controls execution order while the model handles decisions. The docs mention validation, retries for failed checks, and the ability to combine agentic functions with ordinary code.

Who it is for

OpenProgram is aimed at developers who want more control than a no-code agent builder usually offers.

It is a fit for:

- Python developers building custom AI workflows
- teams experimenting with multi-agent systems and branching execution

- researchers building repeatable literature, analysis, or writing pipelines
- operators who want agent sessions visible in the browser or terminal

It may also appeal to users who need reusable agent harnesses for specific jobs rather than a single general-purpose chatbot. The included examples suggest use cases in desktop automation, research, and knowledge-base maintenance.

What to know before you use it

OpenProgram is source-backed, but several practical details still matter before adoption.

- The site describes support for macOS, Linux, and Windows, but the quick-start snippet shown on the page only demonstrates installation on macOS or Linux.
- The runtime is Python 3.11+, so it is not a drop-in tool for environments that cannot run that version.
- Model access depends on external providers such as Anthropic, OpenAI, Gemini, or compatible backends, so you still need valid accounts and model configuration.
- The product emphasizes inspectable execution, but it is not described as a fully autonomous replacement for human review.
- The page does not list pricing, hosted plans, or usage limits, so cost details remain unknown from the source material.
- The sample harnesses are examples, not a guarantee that every workflow will behave the same way; use the official docs when you need exact setup steps or current compatibility information.

If you want an open-source agent framework with a Python-first runtime, OpenProgram offers a structured way to build, inspect, and operate self-programming AI agents with the same core execution model across web, terminal, and CLI surfaces.

FAQ

Is OpenProgram free to use?

What platforms does OpenProgram run on?

Do I need Python to build with OpenProgram?

Can OpenProgram connect to common AI model providers?

Who is OpenProgram best suited for?

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Category	AI
Platform	Web, macOS, Linux, Windows, CLI, API
Launched	Aug 2026
Updated	13 days ago
Verified	16 days ago

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